

WHAT IS CLAIMED IS:

1 1. A multistep method of polishing a semiconductor substrate with
2 a polishing fluid to remove a selected amount of material from said substrate, said
3 method comprising:

4 polishing said substrate to remove a first portion of said selected amount
5 of material by holding said substrate against a polishing pad with a polishing force
6 while applying a polishing solution to said polishing pad;

7 rinsing said polishing pad with a rinsing fluid; and

8 polishing said substrate to remove a second portion of said selected
9 amount of material by holding said substrate against said polishing pad with a polishing
10 force while applying said polishing fluid to said polishing pad.

1 2. The method of claim 1 wherein said polishing fluid is an
2 unstable polishing fluid.

1 3. The method of claim 1 wherein said first portion and said second
2 portion equal said selected amount.

1 4. The method of claim 2 wherein said unstable polishing fluid is
2 mixed in a point of use mixing system prior to applying said polishing solution to said
3 polishing pad.

1 5. The method of claim 1 wherein said rinsing fluid comprises
2 deionized water.

1 6. The method of claim 1 wherein said rinsing is done while said
2 substrate is held against said polishing pad with a 0 psi force.

1 7. A multistep method of polishing a semiconductor substrate in an
2 inline polishing that includes at least first and second polishing stations, wherein said
3 first polishing station includes a first polishing pad and said second polishing station
4 includes a second polishing pad, said method comprising:
5 transferring said substrate to said first polishing;

6 polishing said substrate to remove a first portion of material by holding
7 said substrate against said first polishing pad with a polishing force while applying a
8 first polishing solution to said first polishing pad;
9 rinsing said first polishing pad with a rinsing fluid;
10 polishing said substrate to remove a second portion of material by
11 holding said substrate against said first polishing pad with a polishing force while
12 applying said first polishing fluid to said first polishing pad;
13 transferring said substrate to said second polishing station; and
14 polishing said substrate to remove a third portion of material by holding
15 said substrate against said second polishing pad with a polishing force while applying a
16 second polishing solution to said second polishing pad.

1 8. The method of claim 7 wherein said polishing fluid is an
2 unstable polishing fluid.

1 9. The method of claim 7 wherein said first portion and said second
2 portion equal said selected amount.

1 10. The method of claim 8 wherein said unstable polishing fluid is
2 mixed in a point of use mixing system prior to applying said polishing solution to said
3 polishing pad.

1 11. The method of claim 7 wherein said rinsing fluid comprises
2 deionized water.

1 12. The method of claim 7 wherein said rinsing is done while said
2 substrate is held against said polishing pad with a 0 psi force.

1 13. The method of claim 7 wherein said substrate is transferred to
2 and polished at said second polishing station before being transferred to and polished at
3 said first polishing station.